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MAINTENANCE OF SUPPLIES AND EQUIPMENT

TECHNIQUES FOR DETERMINING REPAIR CYCLE FLOAT

HEADQUARTERS, U.S. ARMY MATERIEL COMMAND JUNE 1971

HEADQUARTERS
UNITED STATES ARMY MATERIEL COMMAND
WASHINGTON, D.C. 20315

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CHAPTER 1

INTRODUCTION

1-1. Purpose. a. This pamphlet provides the user with effective methods for determining the quantity of an end item type which must be stocked in repair cycle float to achieve a specific float availability (a measure of the protection that a certain quantity of end items stocked in repair cycle float provides against stock-out).

b. Two techniques are presented as possible methods for determining the repair cycle float requirements. Each of these techniques was devised to be applicable for different degrees of flexibility in the scheduling of end item missions and overhauls. The first technique addresses the condition where it is possible to exercise a high degree of control over mission and overhaul scheduling; the second technique addresses the condition where limited scheduling control is possible. The effects of mission and overhaul scheduling are presented in the respective discussions of each technique.

c. The repair cycle float quantity obtained from application of either of the following techniques is that quantity to be managed under the designation of repair cycle float for the interval of time over which the calculation parameters are pertinent.

1-2. Scope. This pamphlet applies to Headquarters, U.S. Army Materiel Command (AMC); AMC major subordinate commands; project/product managers; and separate installations and activities reporting directly to Headquarters, AMC.

1-3. General. a. Chapter 2 presents a general overview of the repair cycle float-overhaul process. Chapters 3 and 4 present two techniques for calculating repair cycle float requirements, and chapter 5 provides a sample calculation and comparison of each technique.

b. The appendixes contain tables and charts to facilitate the calculation of repair cycle float quantities.

c. Technical questions concerning the application of these techniques should be addressed to the AMC Maintenance Support Center, Applied Science Division, Letterkenny Army Depot, Chambersburg, Pennsylvania 17201, AUTOVON 242-7739.

CHAPTER 2

OVERVIEW OF REPAIR CYCLE FLOAT-OVERHAUL PROCESS

2-1. Definition of Repair Cycle Float. a. Repair cycle float as defined by AR 750-19 is:

"An additional [in addition to operational readiness float] quantity of end items of mission essential, maintenance significant equipment specified by HQ DA for stockage in the supply system to permit withdrawal of equipment from organization for scheduled overhaul without detracting from the unit's readiness condition. The float is provided for equipment in transit to depot overhaul, awaiting overhaul, in the overhaul process, and (for aircraft only) in transit from depot to unit."

b. The above definition infers that the quantity of an end item stocked in repair cycle float is determined to satisfy two objectives: first, this quantity must be sufficient to fill the overhaul pipeline, and second, this quantity should provide a buffer stock to absorb transient increases in float demands.

2-2. Description of Repair Cycle Float--Overhaul Process. a. Before delving into the discussions of the actual calculation techniques, it is expedient to outline the functional structure of the repair cycle float-overhaul process.

b. The operation of the repair cycle float-overhaul system can most easily be explained by following an end item through the process. The cycle begins with an end item in the field. When or just before this item becomes eligible for overhaul, the scheduling process reacts and requests a repair cycle float replacement. The replacement is then transported from the repair cycle float storage location to the requesting field unit. When the replacement arrives, it is exchanged with the item destined for overhaul. The item scheduled for overhaul is then transported to the depot overhaul facilities where it is to be processed. The item may have to wait in a queue or may proceed into the rebuild-overhaul process. This condition is dictated by the depot's rebuild-overhaul policy pertaining to that type of end item. After the item has been processed by the depot, it is transported to the repair cycle float storage location where it is then added to stock. The cycle is then completed. **A flow diagram of the basic repair cycle float-overhaul system is presented in figure 2-1.**

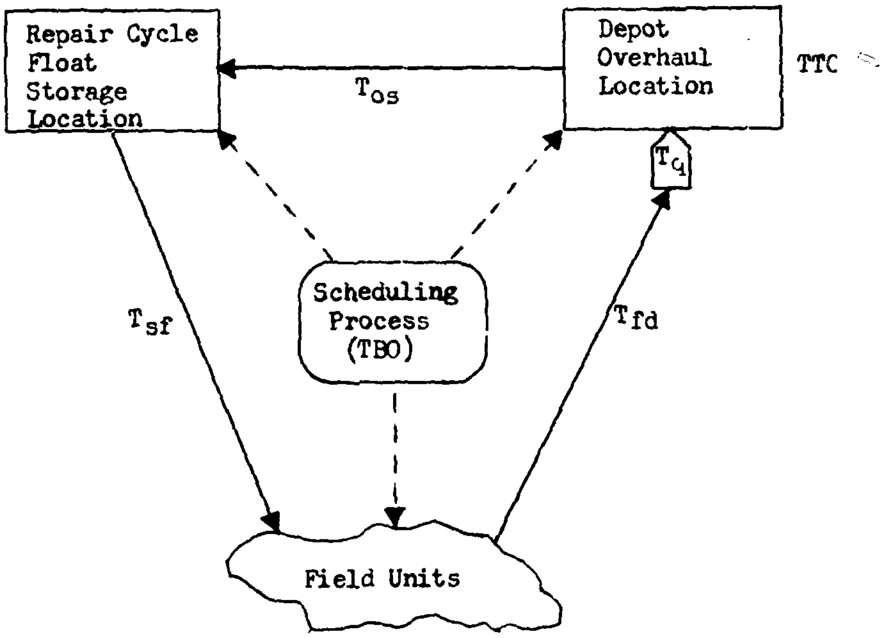


Figure 2-1. Repair cycle float-overhaul system.

c. The overhaul cycle time can be expressed by the following equation:

$$\text{Overhaul cycle time} = OCT = T_{fd} + T_q + TTO + T_{os} + T_{sf} \quad (2\text{-}1)$$

Where: T_{fd} = the time required to transport the end item from field to the depot. This includes packaging and delay time.

T_q = the time the end item waits in queue at the depot before the item can begin the overhaul process.

TTO = the time required for the end item to go through the depot overhaul process.

T_{os} = the time required to transport the end item from the depot overhaul facilities to the float storage location. This includes packaging and delay time.

T_{sf} = the time required to transport the end item from the float storage location to the field for exchange. This includes packaging and delay time.

2-3. Variations of the Repair Cycle Float-Overhaul Process. The preceding discussion for the repair cycle float-overhaul process was, of course, for the general case. Possible variations may be that (i) direct exchange with repair cycle float replacements is not performed; i.e., the end item is sent to overhaul before the float replacement arrives, or (ii) the float exchange may not be permanent; i.e., in the case of aircraft the using unit may retain the float replacement for an end item only until that end item can be overhauled and returned. These variations will be explicitly discussed in appendix A.

2-4. Effects of Mission Scheduling Upon Repair Cycle Float. It becomes apparent that the ability of the user unit to control the usage of particular end item for specified missions greatly influences the rate at which each specific end item approaches the overhaul criteria. By judicious allocation of mission assignments, the magnitude of transient surges in the demands for repair cycle float replacements can be greatly reduced. This reduction, in turn, reduces the magnitude of the requirements for buffer float.

2-5. Effects of Overhaul Scheduling Upon Repair Cycle Float. Another factor which can help to reduce the requirements for buffer float is the flexibility of the overhaul scheduling process. If, in anticipation of a transient surge in float requirements, the overhaul scheduling process can react by advancing or postponing the overhaul of selected items, the magnitude of the surge can again be reduced. Different scheduling policies dictate the two approaches presented in the remainder of this pamphlet.

2-6. Alternative Techniques. Two alternative techniques for calculating repair cycle float quantities are presented in chapters 3 and 4. The technique presented in chapter 3 addresses the condition where mission scheduling and overhaul scheduling are manipulated to yield a constant demand rate for repair cycle float requirements. The technique presented in chapter 4 addresses the condition where the demand rate cannot be considered to be constant.

2-7. Singular Application of Techniques. Before proceeding to the next chapter, the user must be cautioned to note that each of the procedures presented and discussed can be exercised on only one end item type at a time. When float calculations are sought for several different end item types, the appropriate procedure must be followed individually for each of the end item types, using, of course, the input parameters specific to that end item type.

CHAPTER 3

CONSTANT INTERVAL TECHNIQUE

3-1. Conditions for Applicability of Constant Interval Technique. Inherent in this technique are two conditions that must be reasonably approximated for this technique to be applicable. The conditions are:

a. The population of end item type under consideration exhibits a constant time interval between requests for repair cycle float replacements.

b. The overhaul cycle time is approximately a constant value, i.e., there is little variance between the times required for end items of the same type to pass through the repair cycle float-overhaul process.

3-2. Effects of Conditions. Under the condition of a constant time interval between float requests, an "ample" quantity of repair cycle float replacements is equal to the quantity of end items required to fill the overhaul pipeline. (No buffer stock is required because the conditions of this technique preclude variability in the demands for float or in the pipeline time; this, in turn, alleviates the need for buffer stock.) The length of the overhaul pipeline depends on the overhaul cycle time for the specific end item type in question. With the overhaul time being represented by a constant value, the quantity of items required to fill the overhaul pipeline is equivalent to the number of items which will enter the overhaul pipeline within the time interval required for one end item to traverse the pipeline.

3-3. Determining Quantity of Repair Cycle Float. a. The quantity of repair cycle float (Q_{rcf}) which must be stocked for an end item type is equal to the overhaul cycle time (OCT) divided by the time interval between requests from the population for repair cycle float replacements (PTBO). It is expressed by the following equation.

$$Q_{rcf} = (OCT)/(PTBO) \qquad (3\text{-}1)$$

b. The terms of equation (3-1) must be dimensionally correct, and the measure of time involved must be in terms of calendar time.

c. The time interval between requests for a repair cycle float replacement for a single end item is equal to the time between overhaul (TBO) expressed in terms of calendar time.

d. In most instances, the time between overhaul (TBO) data are expressed in terms of usage parameters (i.e., operating hours, miles, rounds). For this procedure, the time between overhaul (TBO) must be expressed in calendar time. The conversion from operating hours to calendar time can readily be accomplished by using the following relationship.

$$\text{TBO (calendar time)} = \frac{\text{TBO (usage)}}{\text{Expected usage per unit of calendar time}} \qquad (3\text{-}2)$$

e. The time interval between requests from the field population for repair cycle float replacements is obtained by dividing the time between overhaul (TBO) for a single end item by the quantity (N) of the end item type which is to be supported by repair cycle float (the population). This equation is:

$$\text{PTBO} = \text{TBO}/N \qquad (3\text{-}3)$$

f. The quantity of that end item type which must be stocked in repair cycle float(Q_{rcf}) can then be calculated by substituting equation (3-3) into equation (3-1).

$$Q_{rcf} = N \times \frac{\text{OCT}}{\text{TBO}} \qquad (3\text{-}4)$$

$$\text{Where: } \frac{\text{OCT (calendar)}}{\text{TBO (calendar)}} = \text{Repair cycle float factor} \qquad (3\text{-}5)$$

Note. At first glance, it may appear that this equation is in error because of the existence of overlapping time intervals, i.e., a float replacement is most likely shipped prior to the expiration of the time between overhaul (TBO) period. However, it must be remembered that: (i) two separate end items are being considered; the end item in the field, and the end item in the overhaul cycle, and (ii) even though float is requested at a time prior to the elapse of TBO (to allow for the time required to ship a replacement from the repair cycle float storage location to the field), the time interval between the subsequent float request from the replacement end item will be a time interval equal to TBO.

g. The repair cycle float factor obtained in the preceding discussion is independent of N. To alleviate most needs to calculate this factor, a table of repair cycle float factors (RCFF) cross-referenced to OCT and TBO is presented in appendix B. After a repair cycle float factor is obtained, the repair cycle float quantity for the end item type is calculated using equation (3-4).

3-4. Factors Contributing to Constant Parameters. a. The preceding discussion has been presented on the premise that the interval between requests for repair cycle float replacements is constant. The realization of this premise may appear to be very elusive. However, there are two effective forms of control available to the user which can be employed to constrain the requests for end items from repair cycle float to occur at a constant time interval. These forms of control are: (i) adjusting the overhaul schedule, and (ii) adjusting mission schedules.

b. The overhaul schedule can be adjusted in such a manner that if several items become eligible for overhaul within the same time interval, the schedule for overhaul of some of these items can be slipped until a more convenient time frame. Also, if a period exists where there are no items scheduled for overhaul, the scheduled overhaul time frame for some end items can be advanced. Thus, by advancing or delaying the scheduled time frame for overhaul of some items, the time interval between requests for repair cycle float replacements can be maintained at a relatively constant value.

c. The mission schedules can be adjusted to vary the duration and frequency of the missions each end item is to perform. Thus, the rate at which each item approaches overhaul can be individually controlled. In this manner, the number of end items which become eligible for overhaul in any period of time can be kept more or less constant; hence, a fairly constant time interval between requests for repair cycle float replacements can again be realized.

d. Another factor not amenable to the user's control, but which expedites the process of adjusting the schedules for overhauls and missions to achieve a constant time interval between requests for repair cycle float replacements, is the introduction of new and reconditioned units into the field inventory. When these end items are introduced into the field inventory, they have a time period equal to TBO before they are overhauled. However, end items already in the field inventory have logged a part of their TBO period and have a shorter period remaining before they are eligible for overhaul. Thus, a variance in the time remaining until overhaul is realized between the respective end items in the field inventory. This variance helps reduce the adjustments required in the scheduling of overhauls and missions to enable a nearly constant time interval between requests for repair cycle float replacements to result. This process is an automatic by-product of the overhaul cycle. It also occurs when the field inventory of end items is augmented by a procurement period spanning several years.

e. The effects of a constant time interval between requests for repair cycle float replacements are realized in the quantity of end items required in repair cycle float. Because the required repair cycle float quantity is constant, no buffer stock is necessary. Hence the repair cycle float quantity is a minimum, requiring only enough items to fill the overhaul pipeline.

3-5. Confidence Level Consideration. No confidence level was presented for the preceding procedure for calculating float quantity. If the repair cycle float-overhaul process is indeed governed by constant time intervals, the quantity of repair cycle float calculated should always be adequate. It must be noted that deviations of the time intervals from constant values may result in float shortage.

CHAPTER 4

VARIABLE INTERVAL TECHNIQUE

4-1. Effects of Variable Intervals. Another condition governing the quantity of an end item type stocked in repair cycle float arises when missions and overhaul times cannot be effectively scheduled. This condition can arise simply because scheduling is not effective in maintaining constant parameter values or when most end items of a specific type (because of field damage) will actually require overhaul at a time prior to the established time before overhaul (TBO). The time interval between requests for repair cycle float replacements is not constant as was assumed in the preceding technique. In this situation, the process of end items requesting repair cycle float replacements can be represented by a Poisson process. A fundamental characteristic of the Poisson distribution is that the occurrence of independent events (requests for repair cycle float replacements) take place at a constant rate.[1] The concepts of renewal theory are invoked to establish that the request from the population for repair cycle float replacements will generally occur at a constant rate.

4-2. Determining Quantity of Repair Cycle Float. a. The average rate of requests for a repair cycle float replacement (λ) for a single end item is equal to the inverse of the mean-time-between-overhaul for the end item type. It is expressed by the following equation.

$$\lambda = \frac{1}{MTBO} \qquad (4\text{-}1)$$

The MTBO in equation (4-1) must be expressed in terms of calendar time.

b. The MTBO is generally expressed in terms of usage parameters (i.e., operating hours, miles, rounds). If this is the case, MTBO must be converted to calendar time. This conversion is accomplished by the following relationship:

$$\text{MTBO (calendar time)} = \frac{\text{MTBO (usage)}}{\text{Expected usage per unit of calendar time}} \qquad (4\text{-}2)$$

c. **The average request rate (Λ) from the population for repair cycle** float replacements is obtained from the product of the quantity (N) of the end item type which is to be supported by repair cycle float (population) and the single end item average rate of requests for a repair cycle float replacement (λ). It is expressed by the following equation.

$$\Lambda = N \times \lambda \qquad (4\text{-}3)$$

[1] If the occurrence rate is found not to be constant and can be considered to be a random variable which follows a gamma distribution, then the negative binomial distribution should be substituted in the following discussion for the **Poisson distribution.**

d. It can be stated that if the requests for repair cycle float replacements (hence, the input to the overhaul cycle) is Poisson distributed, the quantity of end items within the overhaul cycle is also Poisson distributed. The justification for the preceding statement is based upon the works of Palm. Palm's theorem states that if demands on a process are Poisson distributed with rate Λ and mean-process-time T, the quantity of items within the process, when the process is in steady state, is Poisson distributed with parameter ΛT. This theorem is applicable to the repair cycle float-overhaul system under the following interpretation: demands represent end items that require overhaul; mean-process-time represents the mean-overhaul-cycle-time (MOCT); and the quantity of items within the process represents the quantity (N) of end items within the overhaul pipeline.

e. With this interpretation, the Poisson parameter (Θ) for the quantity of an end item within the overhaul cycle is given by the product of the average request rate from the population for repair cycle float replacements (Λ) and the mean overhaul cycle time (MOCT) expressed in calendar time.

$$\Theta = \Lambda T = \Lambda \times \text{MOCT} = N \times \lambda \times \text{MOCT} \qquad (4\text{-}4)$$

f. The mean overhaul cycle time (MOCT) is calculated by the same equation as OCT (equation 2-1), except that the individual parameters are mean values.

g. By using the cumulative Poisson distribution and the Poisson parameter (Θ) of equation (4-4), a probability can be associated with having any quantity F or less end items of a specific type in the overhaul pipeline at any point in time. This probability is given by the following relationship:

$$P\ (X \leq F) = \sum_{x=0}^{F} \frac{\Theta^{x} e^{-\Theta}}{x!} \qquad (4\text{-}5)$$

h. Since the quantity of end items in the overhaul pipeline is equivalent to the quantity of end items required from repair cycle float, the previous relation can be used to establish confidence levels on the adequacy of the quantity of an end item type allocated to repair cycle float (float-availability). Under this interpretation, the parameters of equation (4-5) assume the following meanings:

$P\ (X \leq F)$ is the probability that no more than F end items of a specific type will be required from repair cycle float at any time. This probability is termed float-availability. F is the quantity of an end item type stocked in repair cycle float.

i. The repair cycle float quantity can be determined by using equation (4-5) and varying the float quantity (F) until the desired float-availability ($P(X \leq F)$) is obtained. To simplify the float determination process, four charts are provided in appendix C. Each of these charts is associated with a specific value of float-availability.

j. To determine the repair cycle float quantity using the charts, the following steps are required.

(1) Calculate the demand factor.

$$\text{Demand factor} = \frac{\Theta}{N} = \frac{\text{MOCT}}{\text{MTBO}} \qquad (4\text{-}6)$$

(2) Enter the chart corresponding to the desired float-availability (60%, 70%, 80%, or 90%).

(3) Locate the curve whose value corresponds with the demand factor calculated in step (1) above.

(4) Find the point on the curve whose abscissa (horizontal axis) value corresponds to the quantity (N) of the end item type to be supported by repair cycle float.

(5) Record the repair cycle float factor (RCFF) from the ordinate (vertical axis) which corresponds to the point located in step (4) above.

(6) The quantity of an end item type which must be stocked in repair cycle float to attain the float-availability desired (step (2)) is calculated as follows:

$$\text{Float quantity} = \text{RCFF} \times N \qquad (4\text{-}7)$$

k. Float factors for parameters not indicated on the charts of appendix C can be found by use of equation (4-5) or by interpolation. If interpolation is used, the user is cautioned that the charts are presented on log-log paper, and this scale must be considered in the interpolation process. The scale of the horizontal and vertical axis indicates the relative spacing found on a logarithmic scale.

CHAPTER 5

APPLICATION OF REPAIR CYCLE FLOAT CALCULATION TECHNIQUES

5-1. Contents. This chapter presents a sample application of each of the previously presented repair cycle float calculation techniques. Hypothetical situations and parameters are presented and then the repair cycle float quantity is calculated by the appropriate procedure.

5-2. Constant Interval Technique. a. This paragraph illustrates the use of the constant interval technique discussed in chapter 3. This procedure assumes that the repair cycle float-overhaul process is governed by constant parameters for the end items in question.

b. For this example, assume that there are 78 units of an end item type that are to be supported by repair cycle float. Each end item is overhauled after it attains 2,400 hours of operation. This end item experiences an average of four hours of operation per day. The overhaul process requires 25 days to transport the end item from the repair cycle float storage location to the field, 25 days to transport the end item from the field to the depot, two days in queue awaiting overhaul, 20 days to overhaul the end item, and three days to transport the end item to the repair cycle float storage location.

c. Based on the preceding information and the indicated formulas, the following calculation can be made.

$$\text{Overhaul cycle time} = 25 + 2 + 20 + 3 + 25 = 75 \text{ calendar days} \qquad (2\text{-}1)$$

$$\text{TBO (calendar time)} = \frac{2{,}400 \text{ usage hrs to overhaul}}{4 \text{ usage hrs per calendar day}} \qquad (3\text{-}2)$$

$$= 600 \text{ calendar days}$$

$$Q_{rcf} = (78 \text{ end items}) \times \frac{(75 \text{ calendar days})}{(600 \text{ calendar days})} \qquad (3\text{-}4)$$

$$= \text{Quantity of repair cycle float} = 9.75 \text{ end items}$$

Note. When the units of TBO and OCT are expressed in months, table B-1 can be used to facilitate the calculation of Q_{rcf}.

d. Thus, because only an integer number of end items are possible, 10 end items are required in repair cycle float to support the 78 end items in the field.

5-3. Variable Interval Technique. a. This paragraph illustrates the use of the variable interval technique presented in chapter 4. This procedure allows for variations in the parameters of the repair cycle float overhaul process, and utilizes the mean values of these parameters in conjunction with Poisson distribution to calculate the quantity of end item type **to be stocked in repair cycle float.**

b. For comparative purposes, the values of the system parameters used in this example are the same as those assumed in the previous example of the constant interval procedure (para 5-2). The only difference is that in this example the values of the system parameters are considered to be mean values instead of constant values.

c. Based on the prior information, the cited parameters, and the indicated equations, the following calculations are made.

$$\text{MTOC} = 25 + 2 + 20 + 3 + 25 = 75 \text{ calendar days} \tag{2-1}$$

$$\text{MTBO (calendar time)} = \frac{\text{2,400 usage hrs to overhaul}}{\text{4 usage hrs per calendar day}} \tag{4-2}$$

$$= 600 \text{ calendar days}$$

$$\text{Demand factor} = \frac{75}{600} = .125 \tag{4-6}$$

d. Enter the appropriate chart of appendix C and determine the repair cycle float factor. The factors obtained from the charts and the corresponding float quantity are listed in table 5-1. The float quantities are calculated by using equation (4-7) **(i.e., Float quantity = RCCF x N).**

Table 5-1. Float Factors, Float Quantity, for Demand Factor = .125, and N = 78

FLOAT-AVAILABILITY	FLOAT FACTOR	FLOAT QUANTITY
60%	.135	11
70%	.145	12
80%	.159	13
90%	.176	14

5-4. Comparison of Results. a. Utilizing the same parameters for each procedure, the constant interval procedure indicates a required float **quantity of 10 end items, and the variable interval procedure indicates a required float quantity ranging from 11 to 14 end items depending upon the desired float-availability.**

b. The larger float quantities generated by the variable interval procedure is a result of the uncertainty associated with the respective parameters. These parameters are expressed as mean values, recognizing a variance exists in each parameter. On the other hand, the respective parameters of the constant interval procedure are assumed to have essentially no variance; i.e., they are constant values.

c. These examples serve to illustrate the reduction in the quantity of repair cycle float which can be realized if the parameters of the repair cycle float-overhaul process can be constrained to constant values.

Appendix A

PROCEDURE MODIFICATIONS

A-1. Scope. This appendix presents minor modifications to the procedures to allow for variations in the repair cycle float-overhaul process.

A-2. No Direct Exchange with Float. a. Variation. Direct exchange with repair cycle float items is not performed; i.e., the end item is sent to overhaul at the same time a request for repair cycle float is initiated.

b. Modification. The modification required for the two procedures is to represent the overhaul cycle time as:

Overhaul cycle time = OCT = $T_{fd} + T_q + TTO + T_{sf}$

Where: T_{fd}, T_q, TTO, and T_{fs} are defined in section II.

A-3. Float Exchange Is Not Permanent. a. Variation. The float exchange is not permanent; i.e., the using unit retains the float replacement for an end item, only until the replaced end item is overhauled and returned.

b. Modification. The modification required for the two procedures is to represent the overhaul cycle time as:

Overhaul cycle time = OCT = $T_{fd} + T_q + TTO + T_{df} + T_r$

Where: T_{fd}, T_q, and TTO are defined in section II.

T_{df} is the average time required to transport the end item from the depot directly to the field unit. This includes packaging and delay time.

T_r is the average time required to transport the float replacement end item from the field back to the repair cycle float storage location. This includes packaging and delay time.

Appendix B

REPAIR CYCLE FLOAT FACTOR (RCFF) TABLE FOR CONSTANT INTERVAL PROCEDURE

RCFF = (OCT) / (TBO)

Overhaul Cycle Time (OCT) in months

Time Between Overhaul (TBO) in months

Months	1	2	3	4	5	6	7	8	9	10	11	12	13	14
6	.170	.333	.500	.667	.830	1.00	-	-	-	-	-	-	-	-
9	.110	.220	.333	.450	.560	.680	.780	.890	1.00	-	-	-	-	-
12	.083	.166	.250	.333	.415	.500	.582	.667	.750	.830	.915	1.00	-	-
15	.067	.133	.200	.266	.333	.400	.466	.533	.600	.667	.731	.800	.865	.929
18	.055	.111	.167	.222	.277	.333	.388	.445	.500	.556	.611	.667	.722	.777
21	.048	.095	.143	.190	.238	.285	.333	.380	.428	.475	.523	.571	.619	.666
24	.042	.083	.125	.167	.208	.250	.281	.373	.375	.416	.458	.500	.541	.582
27	.037	.074	.111	.148	.185	.222	.259	.296	.333	.370	.408	.445	.482	.518
30	.033	.067	.100	.133	.167	.200	.233	.266	.300	.333	.366	.400	.434	.466
36	.028	.056	.083	.111	.139	.167	.194	.222	.250	.278	.306	.333	.361	.389
42	.024	.048	.072	.095	.119	.143	.167	.191	.216	.238	.262	.286	.309	.333
48	.021	.042	.063	.083	.104	.125	.146	.167	.187	.208	.209	.250	.271	.292
54	.091	.037	.056	.074	.093	.111	.130	.148	.167	.185	.202	.222	.241	.259
60	.017	.033	.050	.067	.083	.100	.117	.133	.150	.167	.183	.200	.216	.233
66	.015	.031	.046	.061	.076	.091	.106	.121	.136	.152	.167	.182	.197	.212
72	.014	.028	.042	.056	.069	.083	.097	.112	.126	.139	.153	.167	.180	.194
78	.013	.026	.039	.051	.064	.077	.090	.102	.115	.128	.141	.155	.167	.181
84	.012	.024	.036	.048	.060	.071	.083	.095	.107	.119	.131	.143	.155	.167
90	.011	.022	.033	.045	.056	.067	.078	.089	.100	.111	.122	.133	.145	.156
96	.010	.021	.031	.042	.052	.063	.073	.083	.094	.104	.115	.125	.135	.146
102	.010	.020	.030	.039	.049	.059	.069	.078	.088	.098	.108	.117	.127	.137
108	.009	.019	.028	.037	.047	.056	.065	.075	.084	.093	.107	.112	.121	.131
114	.009	.018	.026	.035	.044	.053	.061	.070	.079	.088	.096	.105	.114	.122
120	.008	.017	.025	.033	.042	.050	.058	.067	.075	.083	.092	.100	.108	.117
132	.008	.015	.023	.030	.038	.045	.053	.061	.068	.076	.083	.091	.099	.106
144	.007	.014	.021	.027	.035	.042	.049	.055	.062	.070	.077	.084	.091	.098

Appendix C

REPAIR CYCLE FLOAT FACTOR (RCFF) CHARTS FOR VARIABLE INTERVAL PROCEDURE

Four charts (figs C-1, C-2, C-3, and C-4), representing a float-availability of 60%, 70%, 80%, and 90%, respectively, are contained in this appendix. The procedural steps required to use these charts are presented in paragraph 4-2j, chapter 4.

Appendix C—Continued

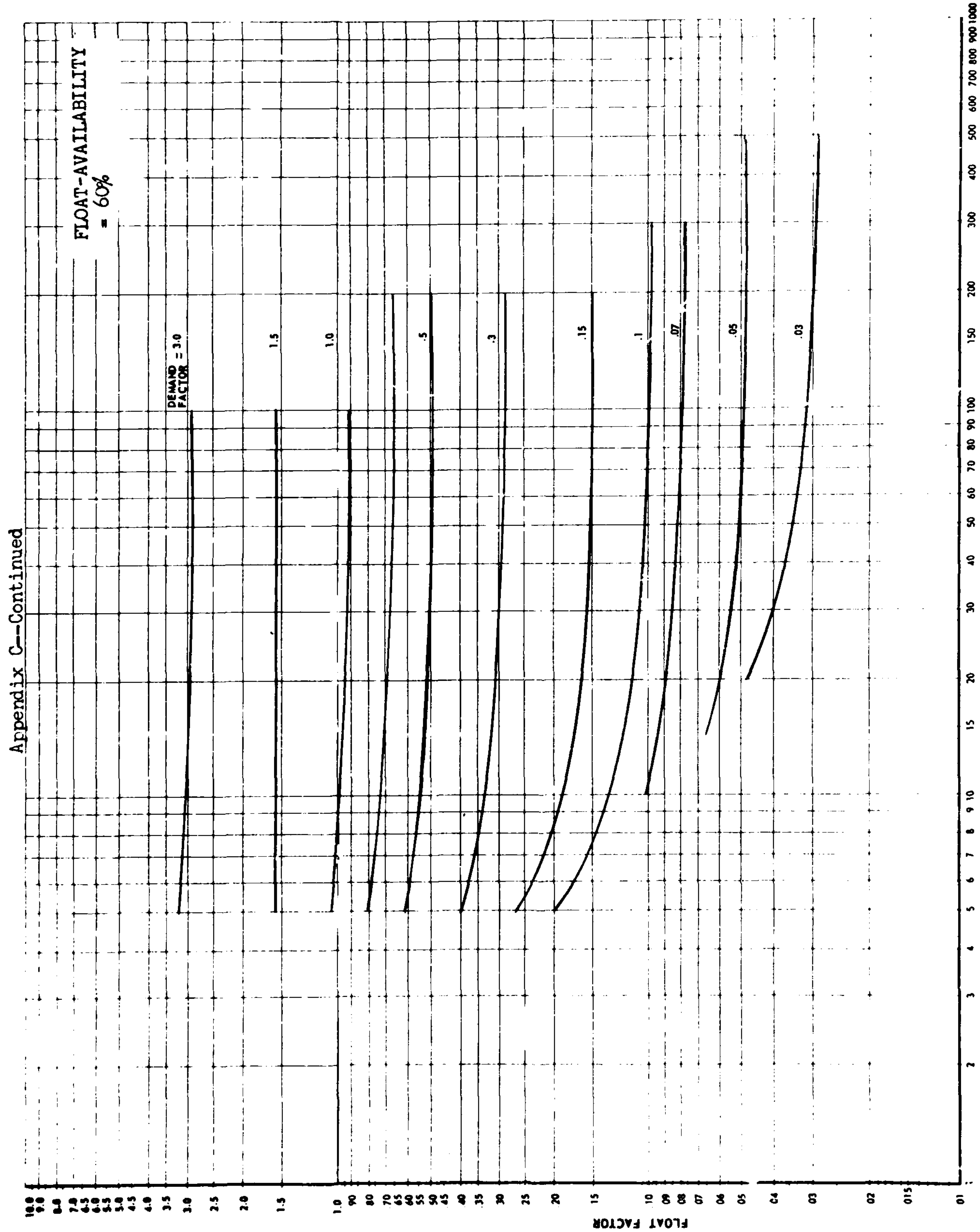


Figure C-1

Appendix C continued

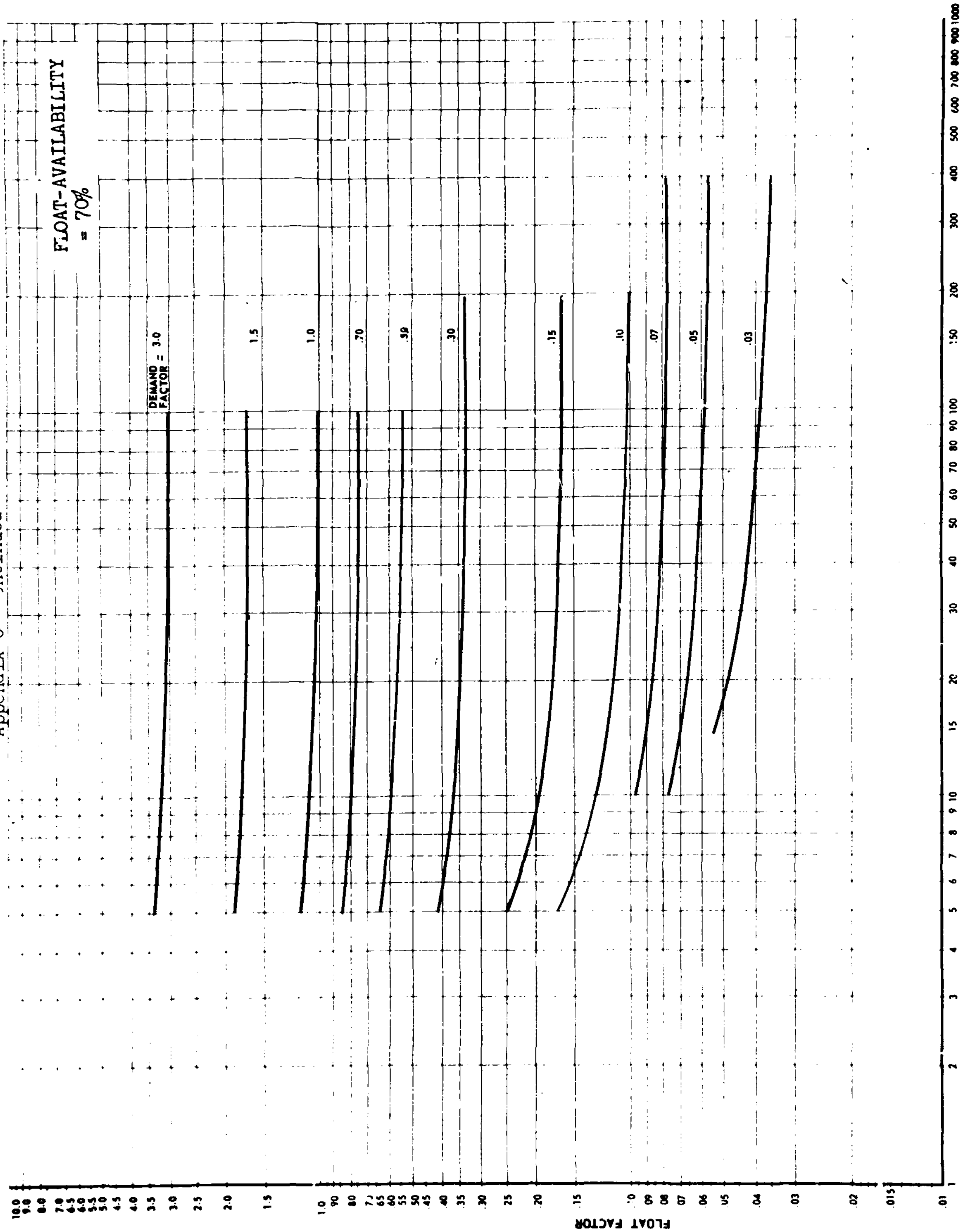
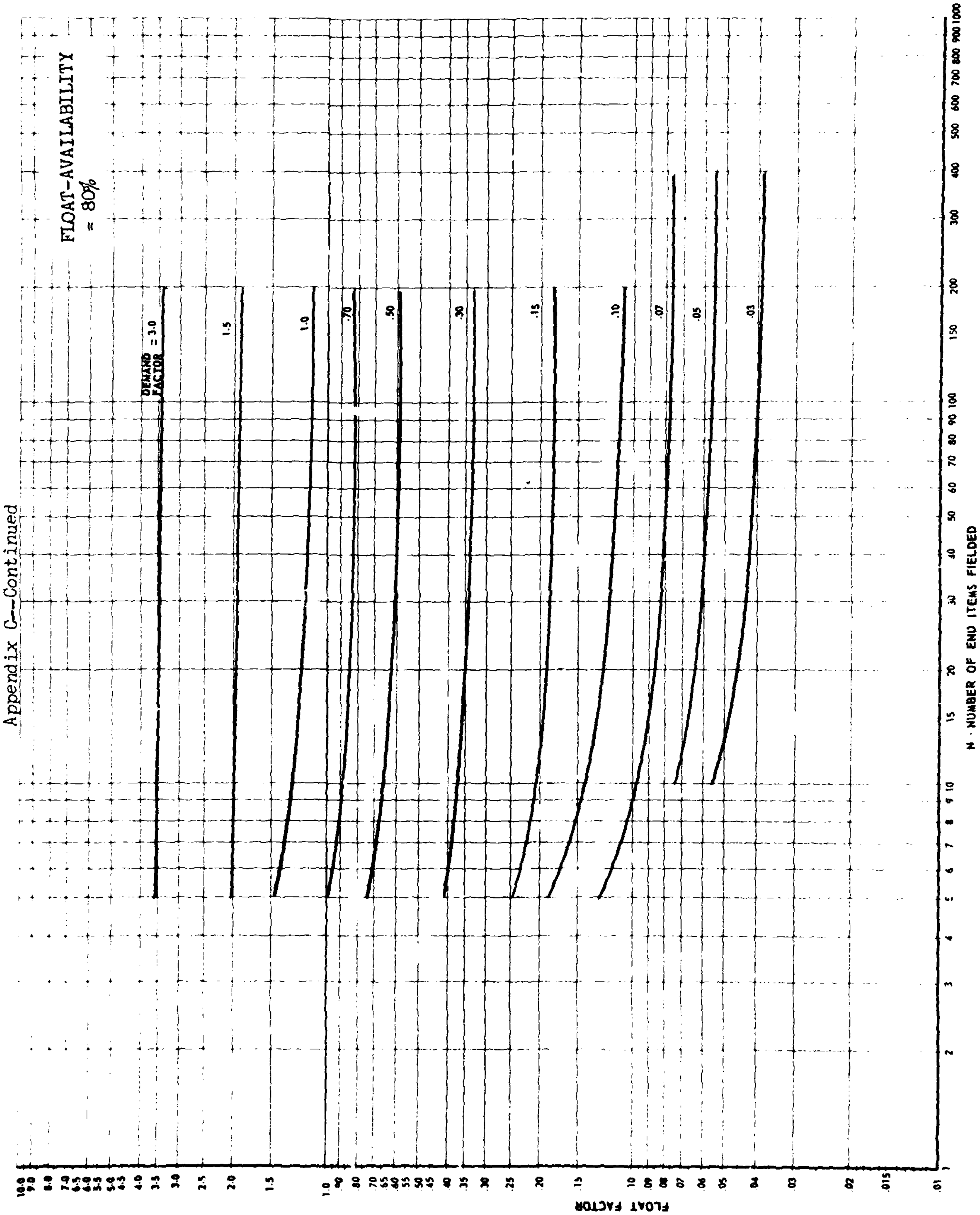


Figure C-2

Appendix C—Continued



Figure

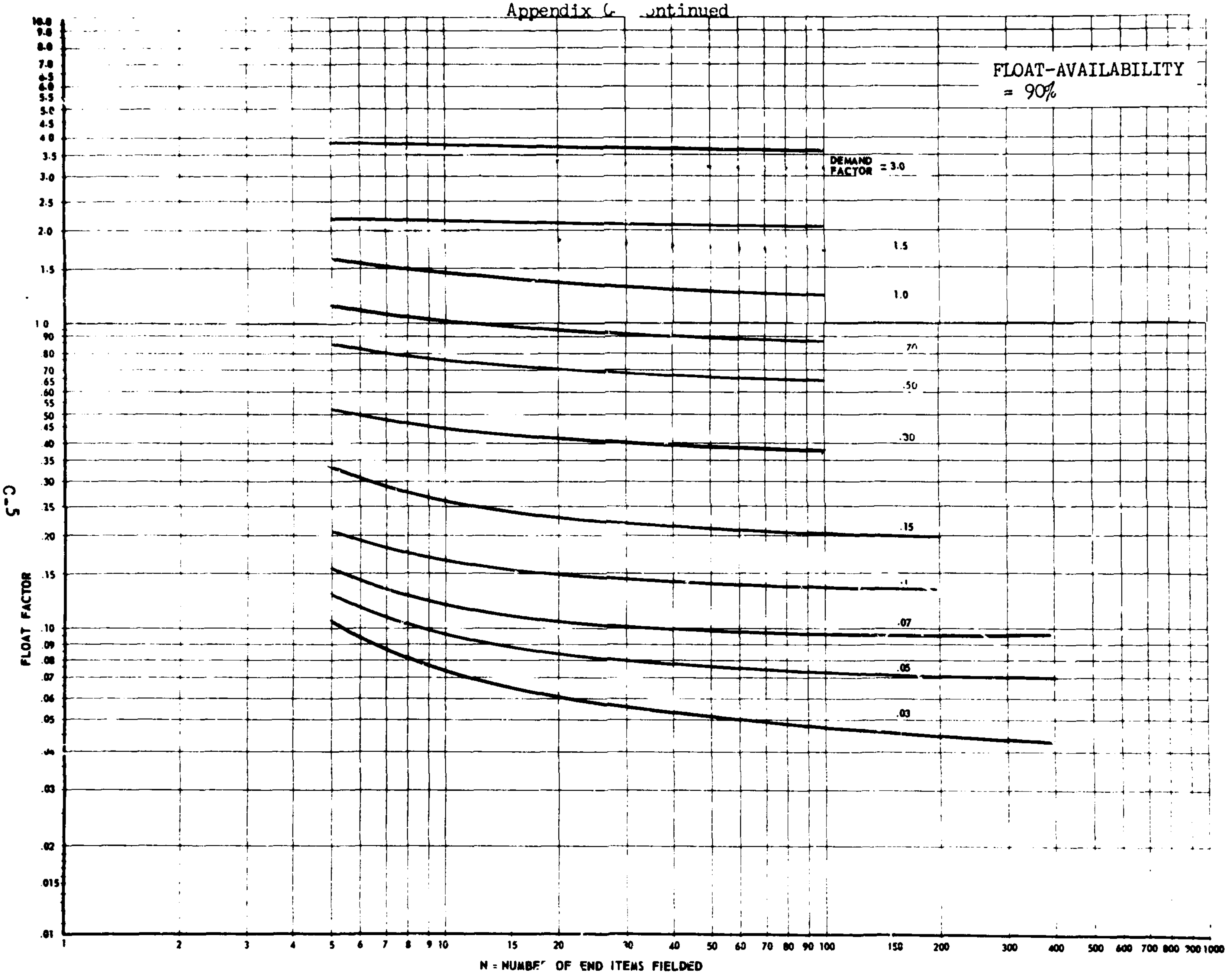

FLOAT-AVAILABILITY = 90%
DEMAND FACTOR = 3.0
1.5
1.0
.70
.50
.30
.15
.1
.07
.05
.03
FLOAT FACTOR
N = NUMBER OF END ITEMS FIELDED

Figure C-4

(AMCMA)

FOR THE COMMANDER:

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Major General, USA
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